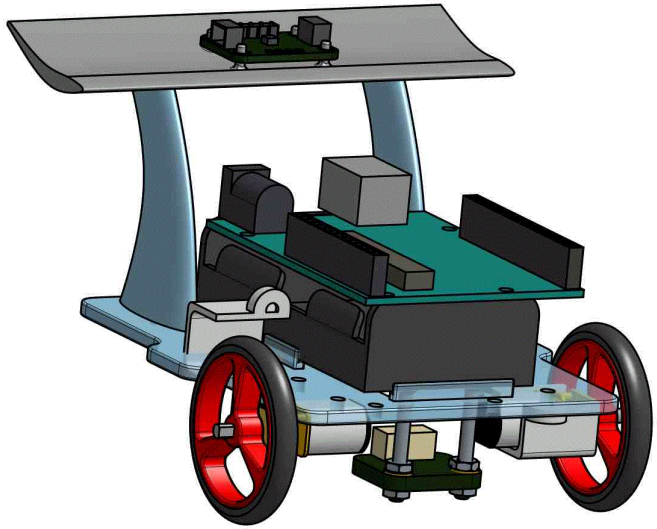
Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 3 Design and Visual Communication 2024

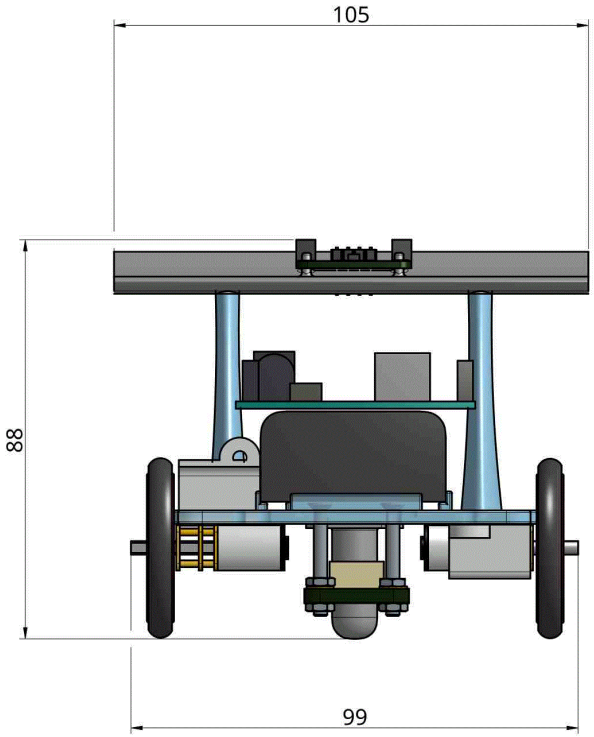
91631 Produce working drawings to communicate production details for a complex design

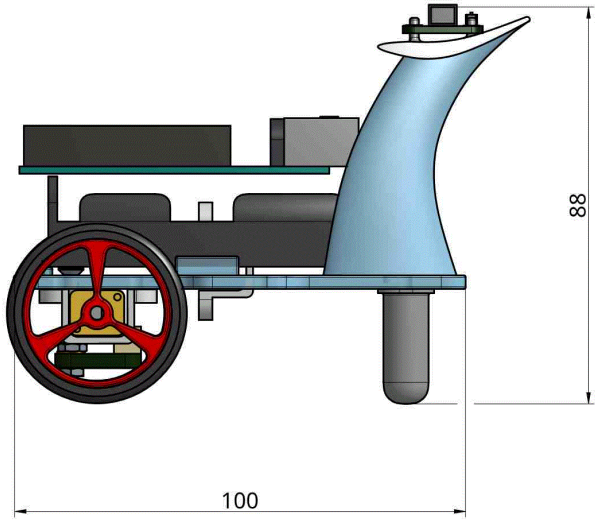
Achievement TOTAL 03



	SCALE: 1:1	UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN MILLIMETERS	
	SHEET: 1 of 6		
	SIZE: A3		

Complete Robot

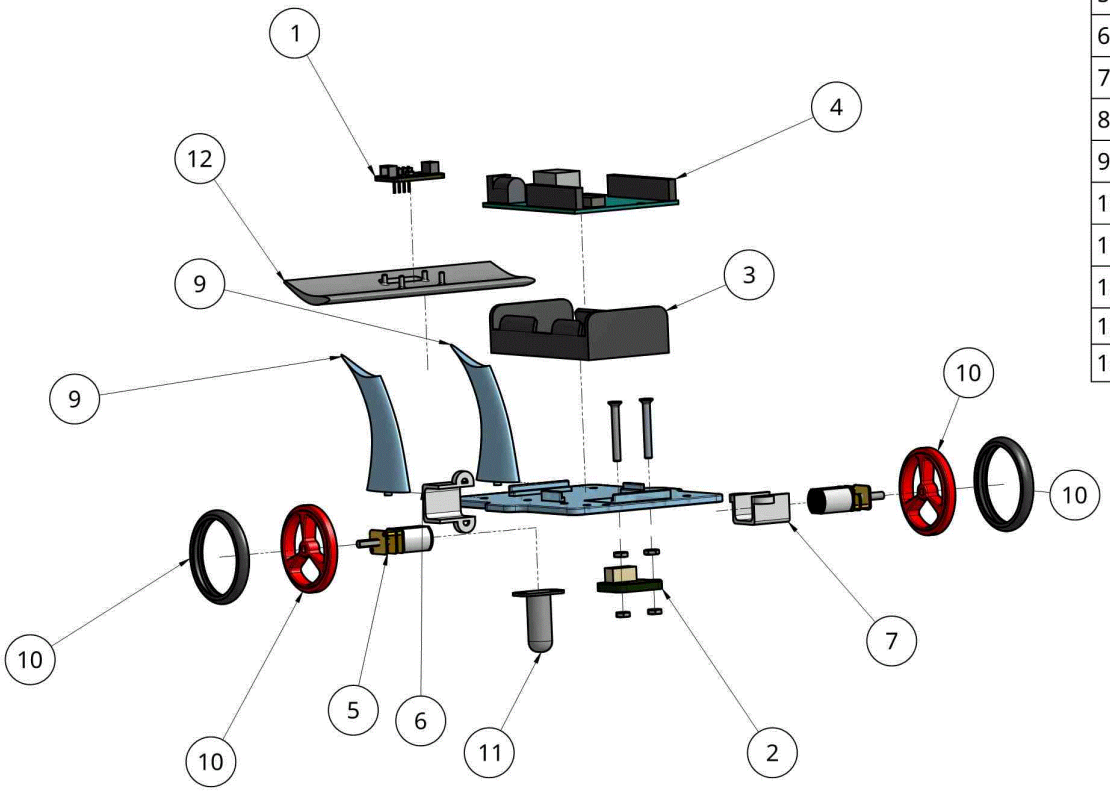




SCALE:	1:1
SHEET:	2 of 6
SIZE:	A3

UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN MILLIMETERS

Exploded view



Item	Quantity	Name
1	1	Compass
2	1	colour sensor
3	1	Battery Holder
4	1	UNO
5	2	N20 motor
6	1	N20 Motor Mount
7	1	N20 Motor Mount
8	1	Base
9	2	Spoiler Strut
10	2	40mm wheel
11	1	Skid
12	1	Spoiler
13	2	PH Countersunk flat head screw M3x0.5 x 25
14	4	Hex thin nut grade A & B M3

SCALE: 1:2

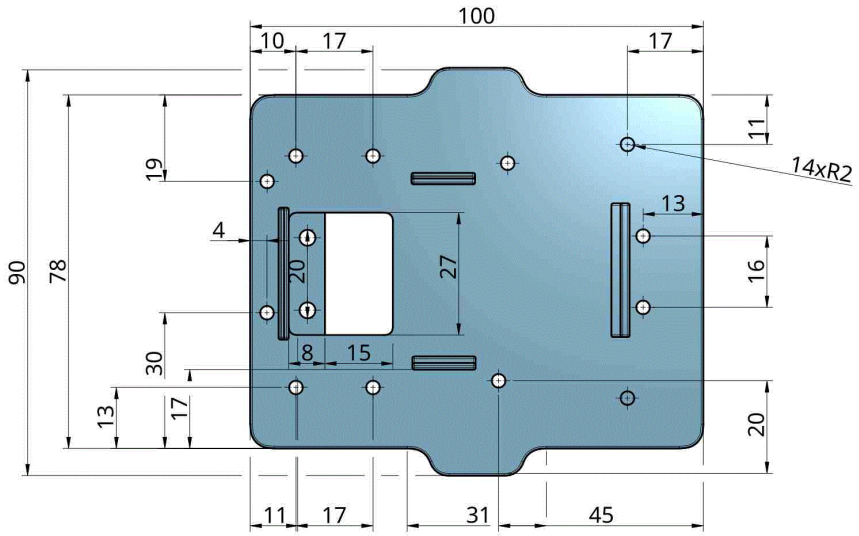
SHEET: 3 of 6

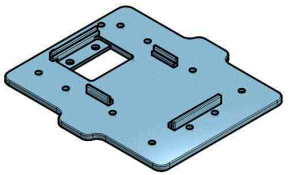
SIZE: A3

UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN MILLIMETERS

Base

Top view





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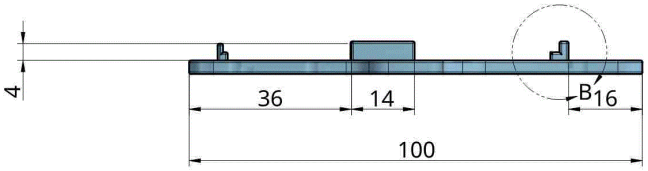
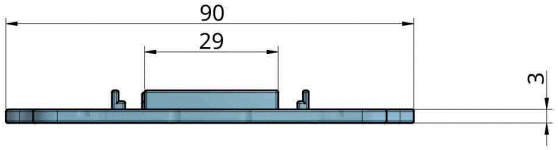
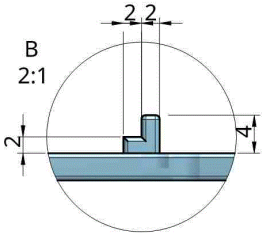


Front view

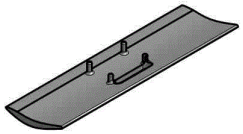


Side view



	SCALE: 1:1 SHEET: 4 of 6 SIZE: A3	UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN MILLIMETERS

Spoiler



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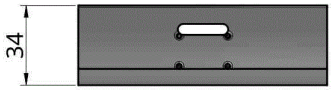
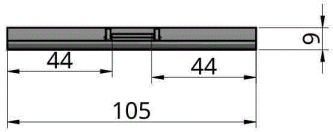
1:2





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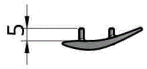

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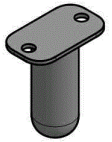
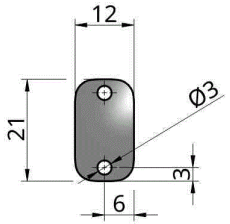
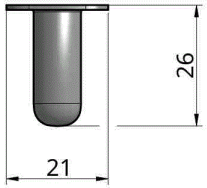
Skid

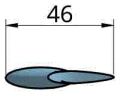






Spoiler Pylon

1:2



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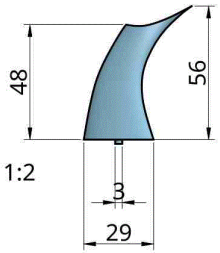

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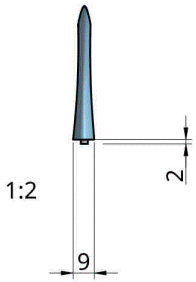

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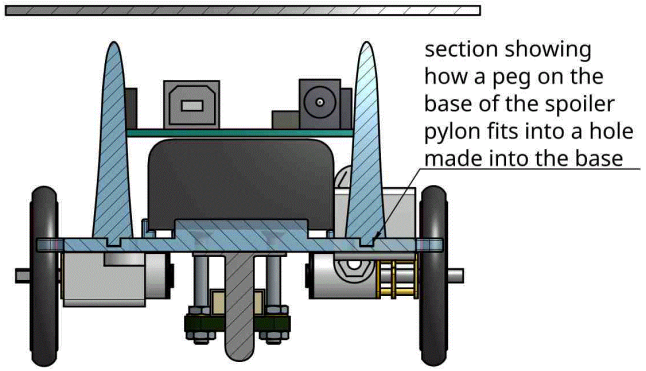
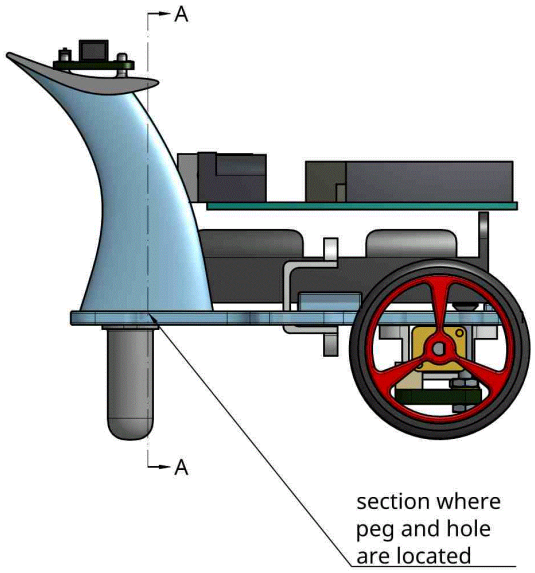
SCALE:	1:1
SHEET:	5 of 6
SIZE:	A3

UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN MILLIMETERS

Detail showing how spoiler connects to robot base



A - A



SCALE:	1:1
SHEET:	6 of 6
SIZE:	A3

UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN MILLIMETERS

Achievement

Subject: Design and Visual Communication

Standard: 91631

Total score: 03

Grade score	Marker commentary
A3	This submission shows a set of plans for a robot and has been produced using CAD. This includes (meeting grade given): • a set of related drawings of some of the components • CAD drawings that help meet precision and accuracy • the use of drawing conventions such recognised scales, dimensioning, and titling • use of exploded and assembly pictorial views to help explain constructional details • orthographic views of some of the components with good use of dimensioning, cross sectioning, and enlarged detail views. Unfortunately, some of the components could have been drawn to a larger scale and more information included regarding assembly. The exploded view is poorly orientated which does not allow informative understanding of assembly.